Beaver Dam Heath Focus Area

Berwick and North Berwick, Maine

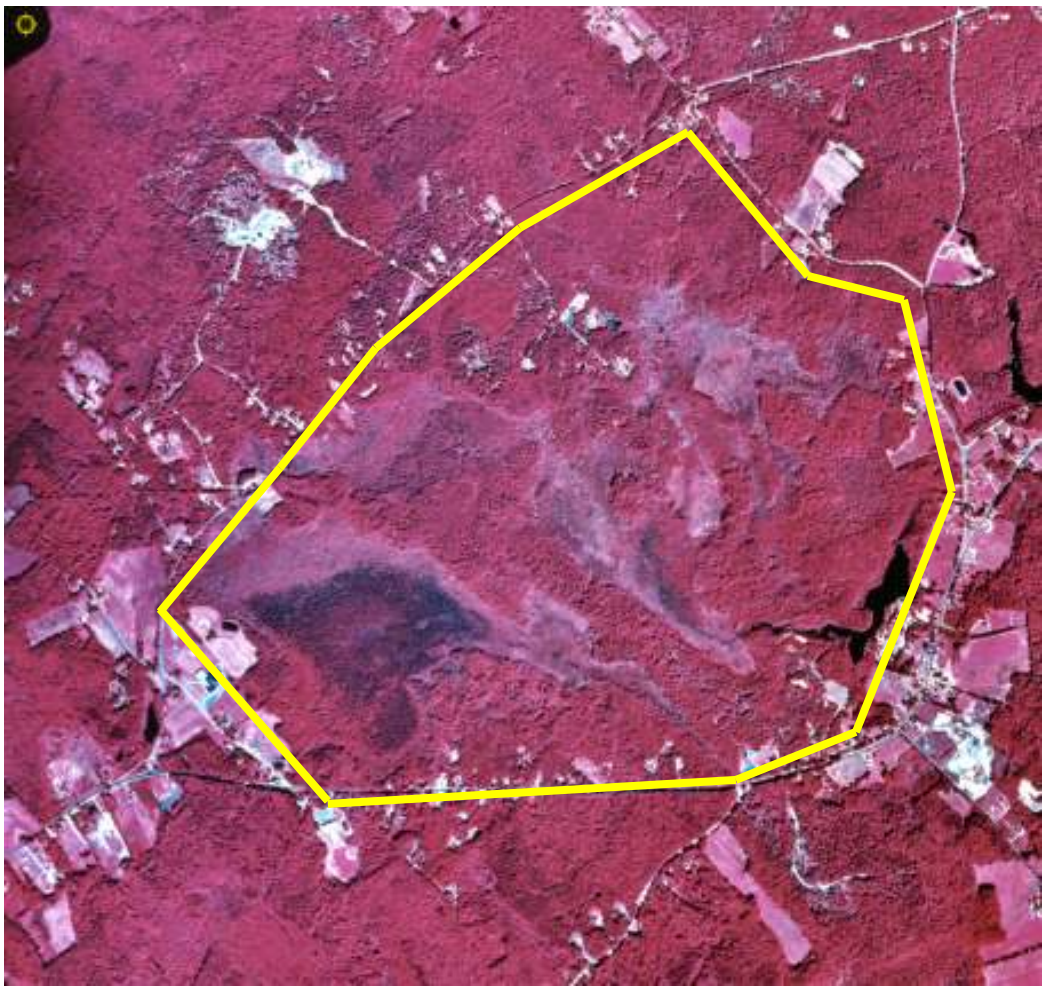
Description:

The Beaver Dam Heath focus area is a 1000 plus acre wetland mosaic interspersed with upland forests. The upland forests are generally dominated by white pine and red oak and have a history of logging. Gently sloping seepage swamps occur in transition areas between the uplands and the larger wetlands. Atlantic white cedar is dominant in several areas forming one of the states largest examples of an Atlantic white cedar swamp natural community. Elsewhere wetlands are dominated by combinations of red maple, gray birch, spiraea, leatherleaf, and winterberry with abundant ferns and sedges. Vegetation cover types vary due to the many subtle differences in hydrology, substrate, and disturbance. The core of the largest wetland is dominated by black spruce (see dark area on air photo on page 2).

Heath from MNAP files

The focus area is known to support two rare animal species and four rare plant species; the state endangered Blandings turtle, state threatened spotted turtle, state threatened eastern joe-pye weed, and the special concern species Atlantic white cedar, Wiegand sedge, and smooth winterberry holly. This area is important habitat for these species because of its large size and few fragmenting features. The rare animals found here are only known to occur in the rapidly developing southern part of the state and are particularly vulnerable to fragmentation of their habitat. Large contiguous natural areas necessary to ensure the survival of these animals are becoming increasingly rare.

The wetlands and uplands in this focus area support the state threatened spotted turtle and the state endangered Blanding's turtle. Spotted and Blanding's turtles are generally found only in the southern most part of the state where increasing development contributes to loss of habitat, habitat fragmentation, and an on-going loss of individuals to road kill. Spotted and Blanding's turtles are most frequently associated with complexes of small, acidic wetlands and vernal pools in large, intact forested landscapes. They also use small streams, shrub swamps, forested swamps, wet meadows, and emergent marshes. Although these turtles spend most of their time in the water, they readily travel over land between wetlands during the spring and summer months. Upland habitats are also critical for basking, aestivating (a period of late summer inactivity), and nesting.



Focus area on 1991 infrared aerial photo

Spotted and Blanding's turtles have evolved relatively long adult life spans to offset the long time it takes to reach reproductive maturity and to offset high levels of nest mortality. Because of this unusual life history, spotted and Blanding's turtle populations occur at low densities, and thus populations are highly vulnerable to any human sources of adult mortality. Road mortality and collecting for pets, for example, can be extremely deleterious, as the attrition of just a few individuals every year can lead to the long-term decline and extinction of a local population. The secondary effects of human development – increased predators (e.g., dogs,

raccoon, skunks), water pollution, filling of small wetlands, and blocking upland travel corridors (roads, rail beds, yards) – also limit populations. Spotted and Blanding's turtles are strictly protected from take (collecting, possession, or killing) by the Maine Endangered Species Act.

Spotted turtle

Blanding's turtle

The only known ecological survey conducted in the heath area was limited in focus. There are still large portions of the site that have not been surveyed and there is a high probability that other rare plants and animals occur here.

Rare Species Table for Beaver Dam Heath:

Common Name	Scientific Name	Status	S-Rank	G-Rank
Rare and Exemplary Natural Communities				
Atlantic white cedar swamp	Atlantic White Cedar Swamp	n/a	S2	G3G5
Rare Plants				
Wiegand sedge	*Carex wiegandii*	SC	S3	G3
Smooth winterberry holly	*Ilex laevigata*	SC	S2	G5
Eastern joe-pye weed	*Eupatorium dubium*	T	S1	G5
Atlantic white cedar	*Chamaecyparis thyoides*	SC	S2	G4
Rare Animals				
Spotted turtle	*Clemmys guttata*	T	S3	G5
Blandings turtle	*Emydoidea blandingii*	E	S2	G4

*see last page for explanation of ranks

Other Resources Mapped by MDIFW:
Deer Wintering Area
Wading Bird / Waterfowl Habitat

Conservation Considerations :

- Natural communities still occurring on the uplands adjacent to the heath and swamps should be conserved as part of the greater wetland ecosystem. Long term preservation of the full compliment of plants and animals found in a high value natural area such as Beaver Dam Heath will be best achieved by retaining as much of the surrounding natural landscape as possible.
- The integrity of wetlands and the processes and life forms they support including rare plants and animals are dependent on the maintenance of the current hydrology and water quality of the site. Intensive timber harvesting, vegetation clearing, soil disturbance, new roads, and development on buffering uplands can result in greater runoff, sedimentation, and other non-point sources of pollution that can degrade the high quality natural systems that occur here;
- No activities should be permitted that could lead to the loss or degradation of turtle wetlands including filling, dredging, sedimentation, or changing of hydrology unless the activity is approved by MDIFW;
- A minimum 250-foot forested buffer zone should be maintained around target wetlands with known Blanding's turtle locations. All wetlands, regardless of size, within 1/4 mile of mapped spotted turtle locations should be considered potential habitat for this wide ranging species, and protected from direct impacts, and buffered by forested upland;
- Impervious surfaces such as yards, buildings, parking lots, and roads should be minimized in the upland landscape within 1/4 mile of turtle wetlands. Natural forest habitat should predominate the landscape. Intensive developments that concentrate human populations and road traffic within 1/4 mile of turtle wetlands should be avoided including subdivisions and service centers;
- Less pervasive is degradation from incidental uses related to the increasing residential development in the area. Upland buffers can also play a major role in protection here. Care needs to be taken that ORV's stay on existing trails and remain out of all wetlands when the ground is not frozen. Existing trails should be reviewed with particular recreation and access needs in mind, and trails closed if they run counter to protection needs. Fragmenting features should be minimized where possible.
- Low-intensity cutting (single tree or small group selection, firewood harvest) is likely compatible with sensitive features as long as operators avoid wetlands. Winter harvests are recommended to minimize impacts to rare plants, animals, and wetland systems. Close adherence to Best Management Practices for forestry activities near vernal pools (see Forestry Endangered and Threatened Species Guide) will ensure the protection of wetland habitats and the amphibian food source they supply;
- Conservation planning for upland features should include setting some areas aside from timber harvesting to allow for the development of some unmanaged forest ecosystems.

Protection Status:

There is no known conservation ownership within the focus area.

STATE RARITY RANKS

S1 Critically imperiled in Maine because of extreme rarity (five or fewer occurrences or very few remaining individuals or acres) or because some aspect of its biology makes it especially vulnerable to extirpation from the State of Maine.

S2 Imperiled in Maine because of rarity (6-20 occurrences or few remaining individuals or acres) or because of other factors making it vulnerable to further decline.

S3 Rare in Maine (on the order of 20-100 occurrences).

S4 Apparently secure in Maine.

S5 Demonstrably secure in Maine.

Note: **State Ranks** are determined by the Maine Natural Areas Program.

GLOBAL RARITY RANKS

G1 Critically imperiled globally because of extreme rarity (five or fewer occurrences or very few remaining individuals or acres) or because some aspect of its biology makes it especially vulnerable to extirpation from the State of Maine.

G2 Globally imperiled because of rarity (6-20 occurrences or few remaining individuals or acres) or because of other factors making it vulnerable to further decline.

G3 Globally rare (on the order of 20-100 occurrences).

G4 Apparently secure globally.

G5 Demonstrably secure globally.

Note: **Global Ranks** are determined by The Nature Conservancy.

STATE LEGAL STATUS FOR PLANTS

Note: State legal status is according to 5 M.R.S.A. § 13076-13079, which mandates the Department of Conservation to produce and biennially update the official list of Maine's endangered and threatened plants. The list is derived by a technical advisory committee of botanists who use data in the Natural Areas Program's database to recommend status changes to the Department of Conservation.

E ENDANGERED; Rare and in danger of being lost from the state in the foreseeable future, or federally listed as Endangered.

T THREATENED; Rare and, with further decline, could become endangered; or federally listed as Threatened.

SC SPECIAL CONCERN; Rare in Maine, based on available information, but not sufficiently rare to be considered Threatened or Endangered.

Visit our web site for more information on rare, threatened and endangered species!
http://www.state.me.us/doc/nrimc/mnap/factsheets/mnapfact.htm